

- B2
- (a) a simulated organ, wherein said simulated organ is a gastro-intestinal tract;
  - (b) a simulated instrument for performing the simulated medical procedure on said simulated organ, wherein said simulated instrument is an endoscope, said endoscope featuring a sensor for determining a location of said sensor in said gastro-intestinal tract;
  - (c) a locator for determining a location of said simulated instrument within said simulated organ;
  - (d) a visual display for displaying images according to said location of said simulated instrument within said simulated organ for providing visual feedback, such that said images simulate actual visual data received during an actual medical procedure as performed on an actual subject, said visual display including:
    - (i) a three-dimensional mathematical model for modeling said simulated organ according to a corresponding actual organ, said model being divided into a plurality of segments, said plurality of segments being arranged in a linear sequence;
    - (ii) a loader for selecting at least one of said plurality of segments from said linear sequence for display, said at least one of said plurality of segments being selected according to said location of said simulated instrument within said simulated organ;
    - (iii) a controller for selecting a simulated image from said segment according to said location of said simulated instrument; and
    - (iv) a displayer for displaying said simulated image;
  - (e) a computer for determining said visual feedback according to said location of said sensor; and
  - (f) a tactile feedback mechanism for providing simulated tactile feedback according to said location of said tip of said endoscope, wherein said tactile feedback mechanism is located in said endoscope, and said endoscope further comprises:

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- (i) a guiding sleeve connected to said tip of said endoscope;
  - (ii) at least one ball bearing attached to said guiding sleeve for rolling along an inner surface of said gastro-intestinal tract;
  - (iii) at least one linear motor attached to said guiding sleeve;
  - (iv) a piston operated by said linear motor, said piston contacting said inner surface of said gastro-intestinal tract; and
  - (v) a controller for controlling said linear motor, such that a position of said piston is determined by said controller, and such that said position of said piston provides said tactile feedback.
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27. (Amended) A system for performing a simulated medical procedure, comprising:

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- (a) a simulated organ, wherein said simulated organ is a gastro-intestinal tract;
  - (b) a simulated instrument for performing the simulated medical procedure on said simulated organ, wherein said simulated instrument is an endoscope, said endoscope featuring a sensor for determining a location of said sensor in said gastro-intestinal tract;
  - (c) a locator for determining a location of said simulated instrument within said simulated organ;
  - (d) a visual display for displaying images according to said location of said simulated instrument within said simulated organ for providing visual feedback, such that said images simulate actual visual data received during an actual medical procedure as performed on an actual subject, said visual display including:
    - (i) a three-dimensional mathematical model for modeling said simulated organ according to a corresponding actual organ, said model being divided into a plurality of

segments, said plurality of segments being arranged in a linear sequence;

- (ii) a loader for selecting at least one of said plurality of segments from said linear sequence for display, said at least one of said plurality of segments being selected according to said location of said simulated instrument within said simulated organ;
- (iii) a controller for selecting a simulated image from said segment according to said location of said simulated instrument; and
- (iv) a displayer for displaying said simulated image; and

- (e) a computer for determining said visual feedback according to said location of said sensor,

133 wherein said endoscope further features a handle for holding said endoscope and a tool unit, said tool unit comprising:

- (i) a simulated forceps;
- (ii) a channel for receiving said simulated forceps, said channel being located in said handle; and
- (iii) a tool control unit for detecting a movement of said simulated forceps, said tool control unit being located in said channel and said tool control unit being in communication with said computer, such that said computer determines said visual feedback and said tactile feedback according to said movement of said simulated forceps.

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**Please add the following new claim 45:**

45. (New) A system for performing a simulated medical procedure, comprising:

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- (a) a simulated organ;
  - (b) a simulated instrument for performing the simulated medical procedure on said simulated organ;
  - (c) a locator for determining a location of said simulated instrument within said simulated organ; and
  - (d) a visual display for displaying images according to said location of said simulated instrument within said simulated organ for providing visual feedback, such that said images simulate actual visual data received during an actual medical procedure as performed on an actual subject, said visual display including:
    - (i) a three-dimensional mathematical model for modeling said simulated organ according to a corresponding actual organ, said model being divided into a plurality of segments, said plurality of segments being arranged in a linear sequence, wherein said mathematical model features a plurality of polygons defined with respect to a spline, said spline determining a geometry of said mathematical model in three dimensions;
    - (ii) a loader for selecting at least one of said plurality of segments from said linear sequence for display, said at least one of said plurality of segments being selected according to said location of said simulated instrument within said simulated organ;
    - (iii) a controller for selecting a simulated image from said segment according to said location of said simulated instrument; and
    - (iv) a displayer for displaying said simulated image.
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#### REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested. Claims 1-27 and 39-44 are